Meeting Minutes Transmittal/Approval
Unit Manager's Meeting: 100 Aggregate Area/100 Area Operable Units
2440 Stevens Center, Room 1200, Richland, Washington
October 20, 1994

FROM/APPROVAL: Nancy Werdel Date 3/16/95
Nancy Werdel, 100 Area Unit Manager, RL (A5-19)

APPROVAL: Date 3/15/95
Phil Staats, 100 Aggregate Area Unit Manager, WA Department of Ecology

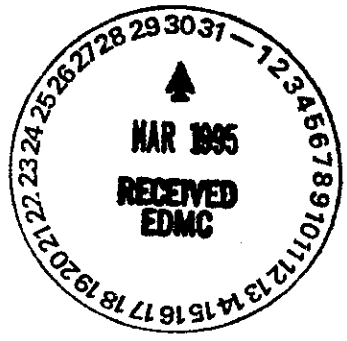
APPROVAL: Date 3-16-95
Dennis Faulk, 100 Aggregate Area Unit Manager, EPA (B5-01)

Meeting Minutes are attached. Minutes are comprised of the following:

Attachment #1	-	Meeting Summary
Attachment #2	-	Attendance Record
Attachment #3	-	Agenda
Attachment #4	-	Action Item Status List
Attachment #5	-	October Unit Manager's Meeting 100 Area Status Package
Attachment #6	-	Dust Suppressant and Wash Water Recycling Tests on 116-D-1B Trench Soil
Attachment #7	-	Soil Washing Remaining Open Items
Attachment #8	-	100-HR-3 Pump & Treat
Attachment #9	-	100-HR-3 NPL Agreement/Change Control Form

Prepared by: Amoret Bunn Date: 3/21/95
Amoret Bunn, Bob Scheck GSSC (B1-42)

Concurrence by: Date: 3/16/95
~~Bob Henckel~~ Greg Eidam, BHI Coordinator (H6-02)



Attachment #1
Meeting and Summary of Commitments and Agreements

Unit Manager's Meeting: 100 Aggregate Area/100 Area Operable Units
October 20, 1994

1. SIGNING OF THE AUGUST 100 AREA UNIT MANAGER'S MEETING MINUTES - No meeting minutes were available to be signed.

2. ACTION ITEM UPDATE: (See Attachment #4 for complete status, items listed below indicate the update to Action Items made during the meeting):

   1AAMS.15 Still being pursued.

3. NEW ACTION ITEMS:

   No new action items were initiated.

4. 100 AREA ACTIVITIES:

   100 Area Status

   - Operable Unit Status: Attachment #5 was provided for general information on the 100 Areas Operable Units.

   - 100-D Area - Joan Woolard provided the general status.

     SOIL WASHING STATUS - Shas Mattigod provided an update on the status of soil washing activities. He provided the handouts (see Attachments #6 and 7) and noted the open items remaining for start of soil washing. He noted the concern of concentrating radionuclides in the wash water. It is suspected that the use of electrolyte concentrate radionuclides contaminants in the recycle wash water. It was suggested that the treatment test should proceed utilizing only wash water with no electrolyte, and a proposal on these issues will be prepared for the next UMM meeting. Dennis agreed that electrolytes should not be used at the start-up of the soil washing test until warranted.

     Joan Woolard added that a change package needs to be prepared to include change in milestone date because of open items remaining for start of soil washing (listed in Attachment #7). Dennis and Phil stated that the regulators' comments for the test procedures will be submitted by next Tuesday. A meeting was scheduled for Wednesday at 1:00PM, location to be determined. The meeting agenda includes all open items including a draft of the change package where work scope, schedule and electrolyte deletion will be discussed.

     HR-3 PUMP & TREAT - Joan Woolard provided two handouts (see Attachments #8 and 9) on the status of 100-HR-3 Pump and Treat activities and NPL Change Control Form for Phase II Treatability Test. The NPL form summarized the agreement reached on a meeting scheduled for October 12, 1994, discussing Phase II work activities. Phase II is scheduled to start on November 15, 1995.

Joan Woolard discussed a period of shut down in the pump and treat process because field instrument detected hydrocarbons in the effluent stream. The system was off between September 15 through October 14. An off-site laboratory confirmed that there were no contaminants of concern in the effluent samples. It was concluded that the field instrument mistakenly identified standards of calibration for contaminants. The data was reviewed during the October 14 meeting. Joan added that the system is scheduled to be off during October 31 through November 1 for electrical work. Wayne Soaper requested a memo documenting the shut down.

- D Ponds - Joan Woolard provided the general status. It was noted that no sampling occur at D Pond.

- 118-B-1 Excavation - Joan Woolard provided the status of activities at the 118-B-1 burial ground excavation treatability test. She indicated that 150 cubic yards of contaminated soil and overburden were removed from D pit with low activity (2 mrem). Greg noted that he is taking care of culture resources issues with the tribal nations. Ted and Dennis requested copies of responding letter to the tribes.

- 100-B/C Area - Dennis noted that he has no comments on the 100-BC-2 LFI/QRA, and requested that a copy be send to the tribal nations. Ted requested an opportunity to comment on the LFI. ~~Because of lake of time,~~ it was decided that Ted will submitted comments on the LFI to Dennis, and EPA will determine if they want to reopen the issue.

- 100-K Area - DOE is in the process of finalizing comments on the 100-KR-1 FFS and PP. The documents will be submitted to regulators in December.

  Alan suggested to combine 100-KR-2 and 100-KR-3 Operable Units with a change package request. Dennis requested that the change package be submitted for the project manager meeting.

- 100-F Area - 100-FR-3 FFS and PP are currently scheduled to be submitted to the regulators in December 1994. A change package will be submitted to the regulators to reschedule the submittal date to December 1995. The delay of the submittal date is to provide time to incorporate the TCE groundwater contaminant plume study. The Description Of Work for the soil gas investigation for the TCE plume is being reviewed by regulators. The comments to DOE will be submitted by next week.

  The 100 Area groundwater monitoring program including 100-FR-3 is being modified for analytical list and number of sampled wells. The issue will be discussed with unit managers.

- 100-H Area - Dick Biggerstaff provided the status of activities. Wayne requested more information on sampling costs and breakdown of costs associated with monitoring that has already occurred because justification of costs are needed. Bob Henkle will provide the required information.

5. INFORMATION ITEMS:

- ROD Working Group Status - Bob Henkle noted that the next meeting is scheduled for the 25th discussing strategy.

- Source Document - Dennis noted that regulators' comments for the Source Document will be submitted to DOE next week.

6. NEXT MEETINGS: The next meetings are scheduled for November 17, 1994.

100 Aggregate Area Unit Manager's Meeting
Official Attendance Record
October 20, 1994

Please print clearly and use black ink

PRINTED NAME	ORGANIZATION	O.U. ROLE	TELEPHONE
RP Henckel	BHI	100 Area	376-2091
Stephanie Johansen	Dames & Moore	GSSC	946-3693
Greg B. Mitchem	BHI	100 Area	372-9207
Diana Sickle	BHI	Support	375-9422
Alan D. Krug	BHI	100 K/F Prj Mgr.	376-5634
Phil Hast	Ecology	OU	736-3029
Jeff Bruggeman	COE	F & K	783-6253
Bob Schieck	Dames & Moore	GSSC-RL	946-3488
Ellen Raymer	BHI	TPA Support	372-9410
Richard Biggerstaff	BHI	H Area Proj. Mgr	3723729
Ted Wardley	Ecology	100 D, 13C 200 Area	736-3012
JOAN WOOLARD	BHI	D Area	6-2537
Larry Gadbois	EPA	U.M.	376-9884
Dennis Faulk	EPA	U.M.	376-8631
K Michael Thompson	DOE-RL	UM	373-0750
Shas Mattigod	PNL	100 Area	376-4311
Pamela Innis	EPA	U.M.	376-4919
Nicole Kimball	DOE-RL	100 Area	376-4670
Wayne Sayer	Ecology	UM	736-3049
Kelly Cook	CHI	Task Lead	373-3234
Ralph Wilson	CHI	100 Area	375-9437
Margaret Bunn	Dames & Moore	GSSC-RL	946-3695

Attachment #3
Agenda

Unit Manager's Meeting: 100 Aggregate Area/100 Area Operable Units
October 20, 1994

100 Area General Discussions

* General Status - R. Henckel

* Soil Washing - J. Woolard

* HR-3 Pump & Treat - J. Woolard

* 118-B-1 Burial Ground Excavation Treatability Test - J. Woolard

* Project Managers Meeting

Operable Unit Status - Questions

Action Item Status

Attachment #4

Unit Manager's Meeting: 100 Aggregate Area/100 Area Operable Units
October 20, 1994

Action Item Status List

ITEM NO.	ACTION	STATUS
1AAMS.15	Provide response to April 2 EPA letter concerning river seeps. Action: Mike Thompson (RL) 07/27/94.	Open (7/29/92). In DOE for transmittal (8/26/92). Letter is pending (03/31/94).
1AAMS.16	DOE should transmit Revision 1 of M-30-01.	Closed 07/27/94.
1AAMS.19	Meet, before the end of the month, with RL, EPA and Ecology concerned parties to discuss ERDF waste acceptance criteria and expected volumes. Action: Bryan Foley	Closed 07/27/94. Paul Beaver is arranging a meeting to discuss waste acceptance criteria for the ERDF.
1AAMS.20	Confirm that all persons requesting addition to the UMM agenda distribution list from the Washington Department of Ecology have been included. Action: Diana Sickle	Closed 08/24/94.

100 AREA UNIT MANAGERS' MEETING

100-B/C, 100-K, 100-D, 100-H, AND 100-F

STATUS PACKAGE

October 20, 1994

100 AREA TREATABILITY TEST STATUS

118-B-1 EXCAVATION TREATABILITY TEST

Excavated over 2000 cy overburden soil. Overburden between 5 feet and 12 feet depth has been mixed with solid waste material. Waste removal has been initiated. Work is currently behind schedule, though actual status cannot be assessed until waste removal rates have been determined. The disc screen has arrived from the vendor and is being assembled. Sorting table modifications are complete.

100-HR-3 PUMP AND TREAT

Construction activities continue to prepare the system for 24 hour/day pumping. Most system construction items are complete with the exception of electrical controls and heat trace.

A meeting was held with the regulatory agencies to discuss Phase II operation. It was agreed that Phase II operation will consist of 24 hour/day pumping 5 days/week. Phase II operation will commence on November 15, 1994.

Operations were temporarily suspended from September 30 to October 14 due to concern over the possibility of volatile organics in the system (detected during field screening). Laboratory confirmation samples indicated no volatile organics of concern. Testing has been resumed.

100 AREA SOIL WASHING

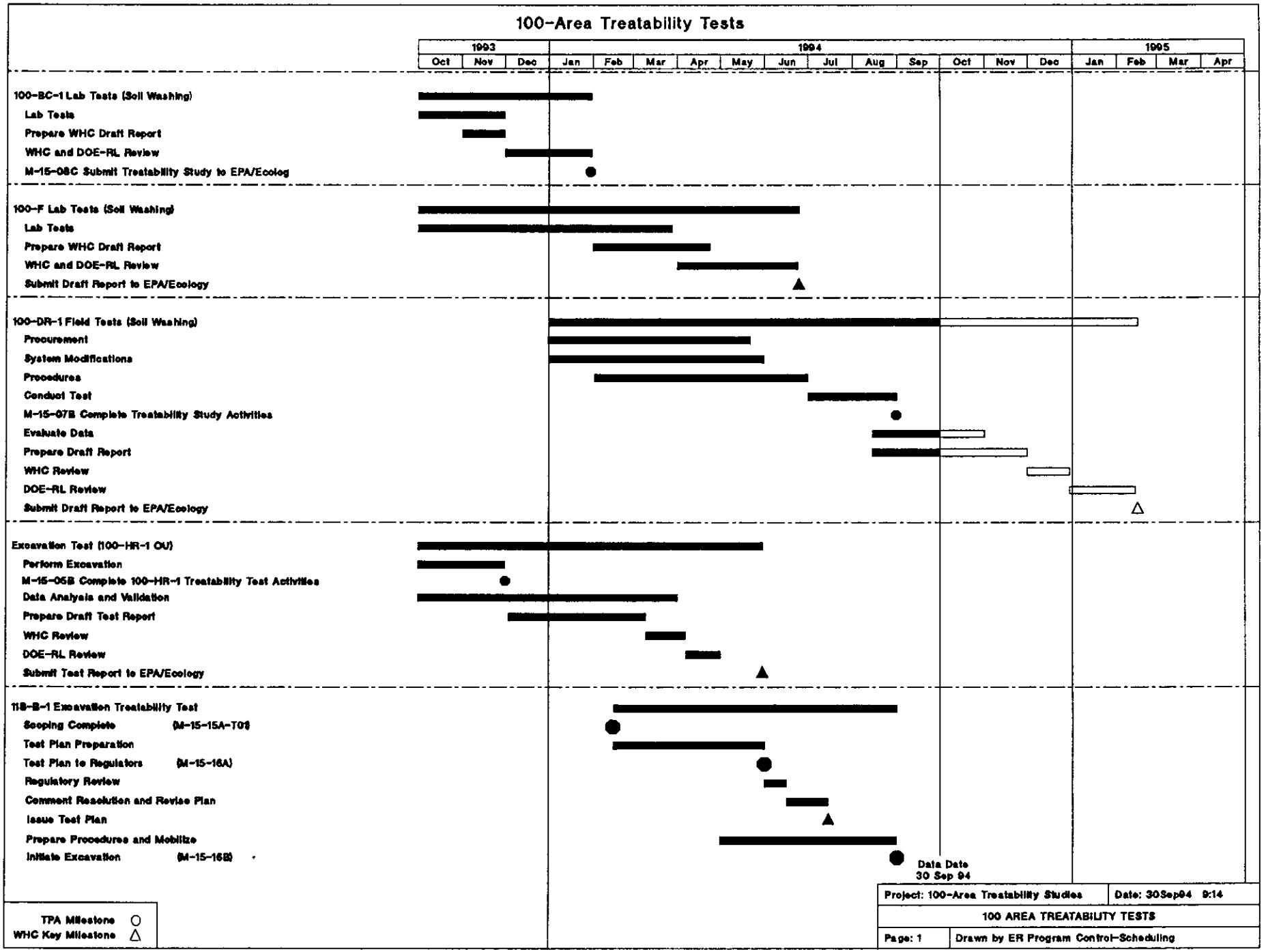
100-DR-1 Pilot Scale Test

Site preparation has been completed, including containment liners and layout for setting equipment. Equipment is currently being placed at the site. The final major piece of equipment (double deck screen) is scheduled to arrive on October 17, 1994. KEH is developing the electrical system for soil washing equipment.

Preparation of test documentation is proceeding. The Test Procedures were transmitted to the regulatory agencies for review in May, 1994. To date, only comments have been received by EPA. A quality assurance project plan, sampling and analysis plan, and waste control plan are being prepared for submittal to the regulatory agencies in October, 1994. A cooperative review effort will be required to complete document review for a November 1994 startup.

Laboratory Test

PNL is continuing with wash water recycle test. The focus is now on recycle tests using electrolyte. The first two of five cycles are completed. The third is in progress. Gamma data from the 2nd cycle indicate a buildup of activity in the wash water.



B AREA

100-BC-1 FFS Report

DOE/RL review comments on the 100-BC-1 FFS and IRM Proposed Plan have been addressed. The reports are expected to be released in November.

100-BC-2 QRA and LFI Reports

TASK 11: The 100-BC-2 QRA was initiated in January, 1994 and was subsequently combined with the LFI, producing one document.

TASK 13: The 100-BC-2 LFI was initiated in January, 1994 and was subsequently combined with the QRA, producing one document. The document is currently under regulator review, with comments due by October 15, 1994.

100-BC-2 FFS Report

Work on the Focused Feasibility Study and IRM Proposed Plan has been initiated.

100-BC-5 QRA and LFI Reports

Completed

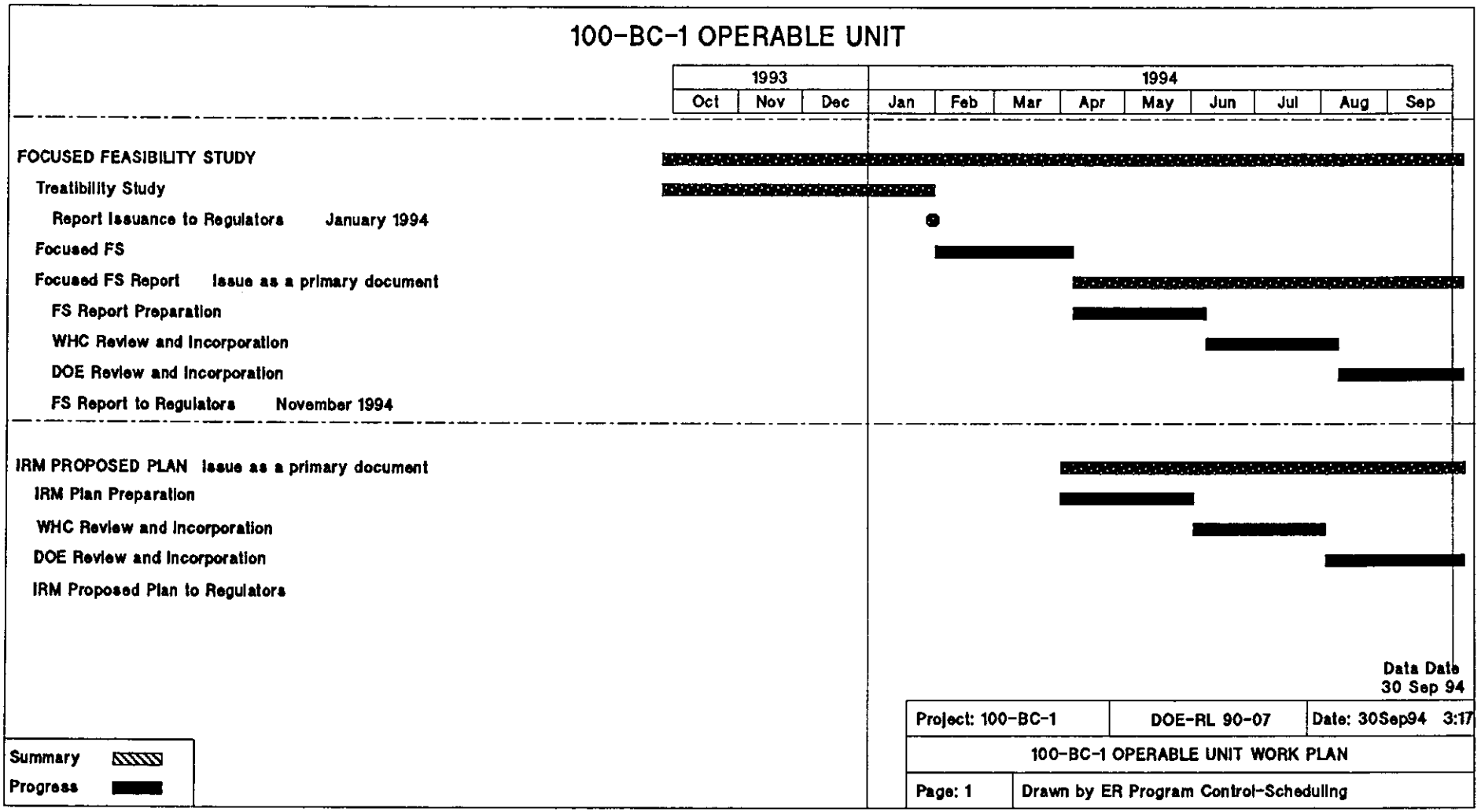
100-BC-5 FFS Report

The 100-BC-5 FFS is currently under DOE review.

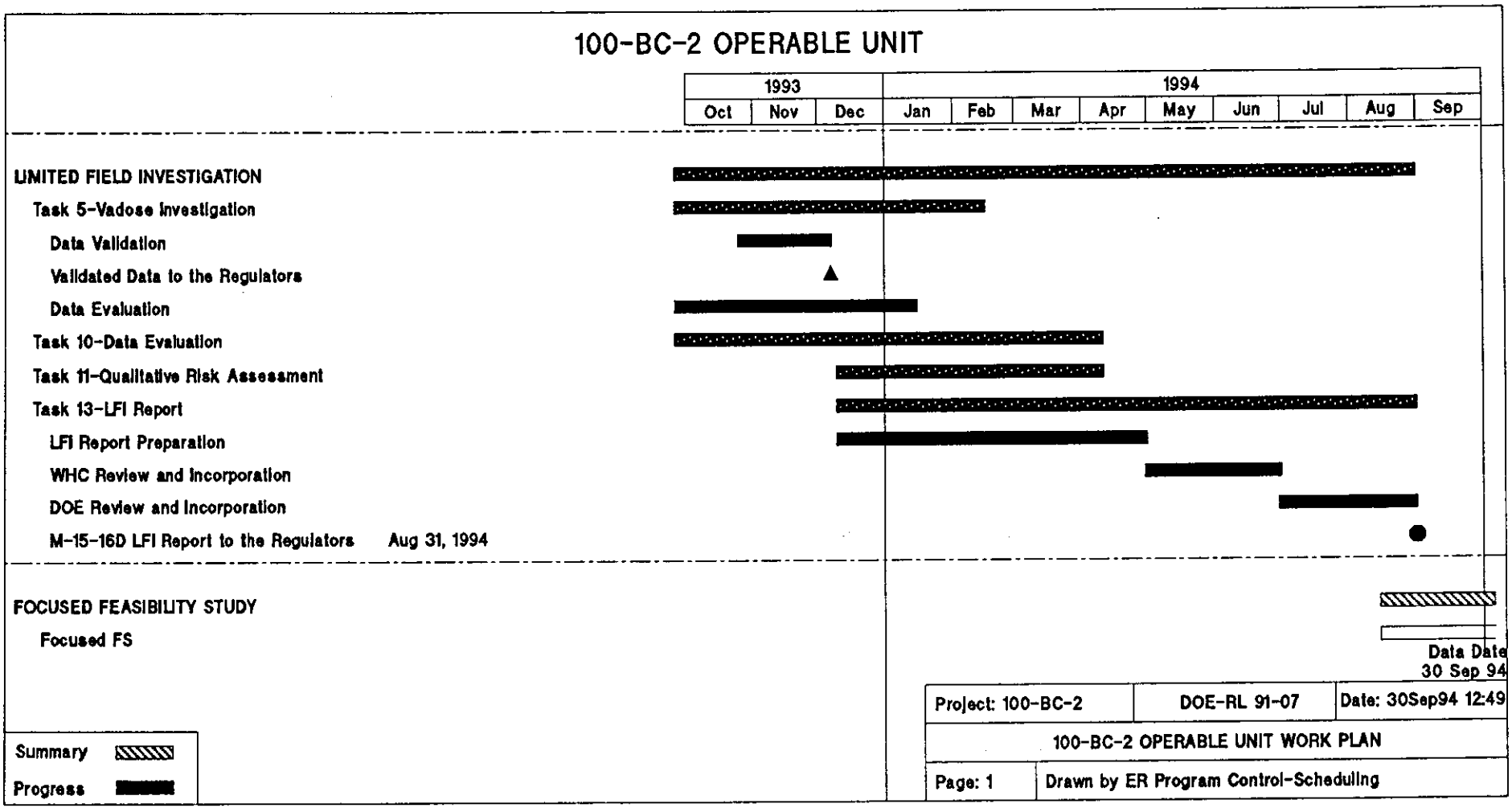
Riverland ERA/100-IU-1

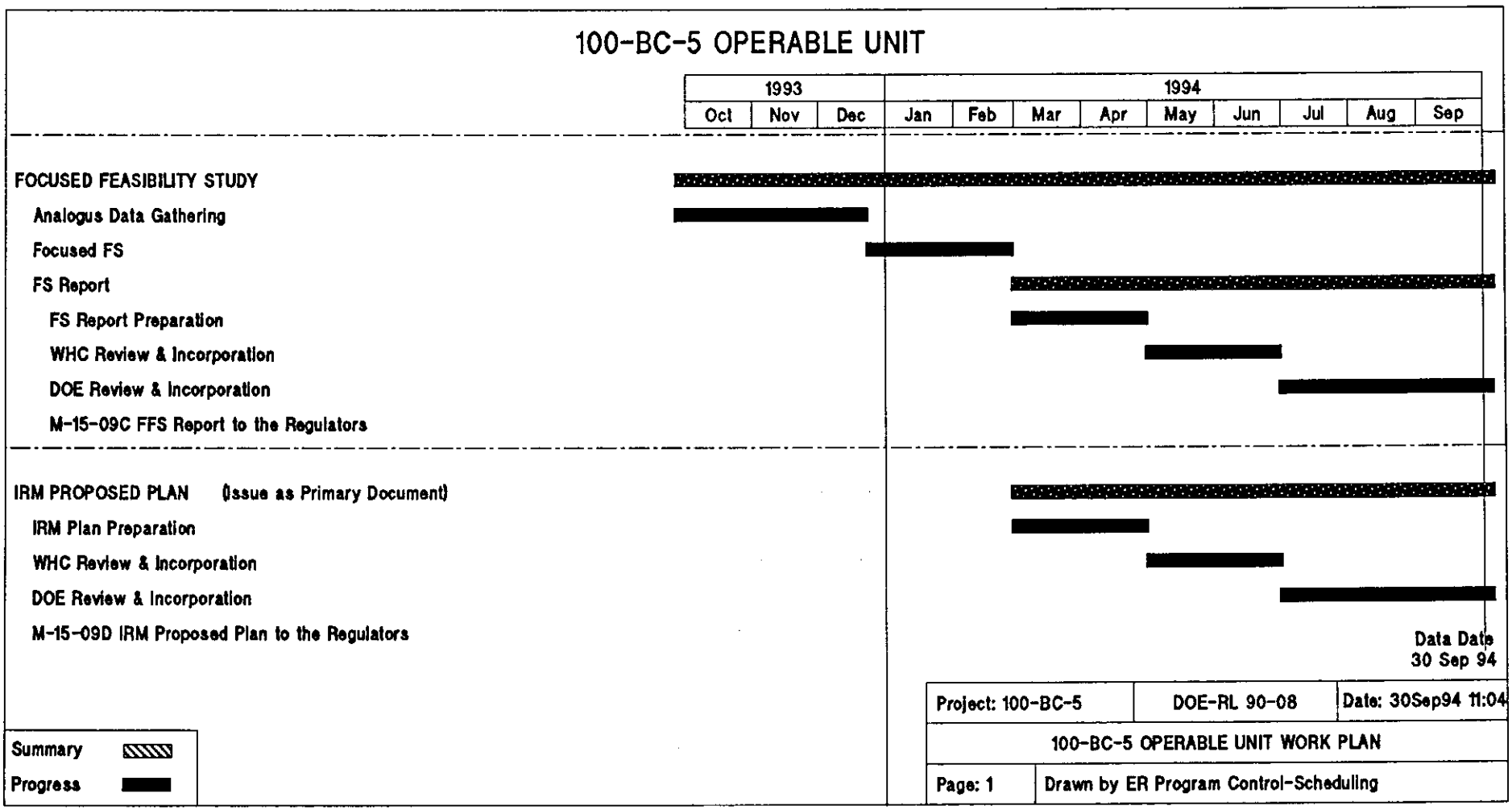
On July 26, 1994 a PNL archeologist conducting a cultural resources field survey on the Riverland ERA Site discovered a suspect waste site. The suspect site is located in the southwest portion of the Riverland ERA Boundary. The site is approximately 360 yards southwest of Well 6-49-111. Suspect waste herbicide/pesticide metal 5-gallon containers were found covering an approximate area of 8 ft. x ft.

100-BC-1 OPERABLE UNIT



100-BC-2 OPERABLE UNIT



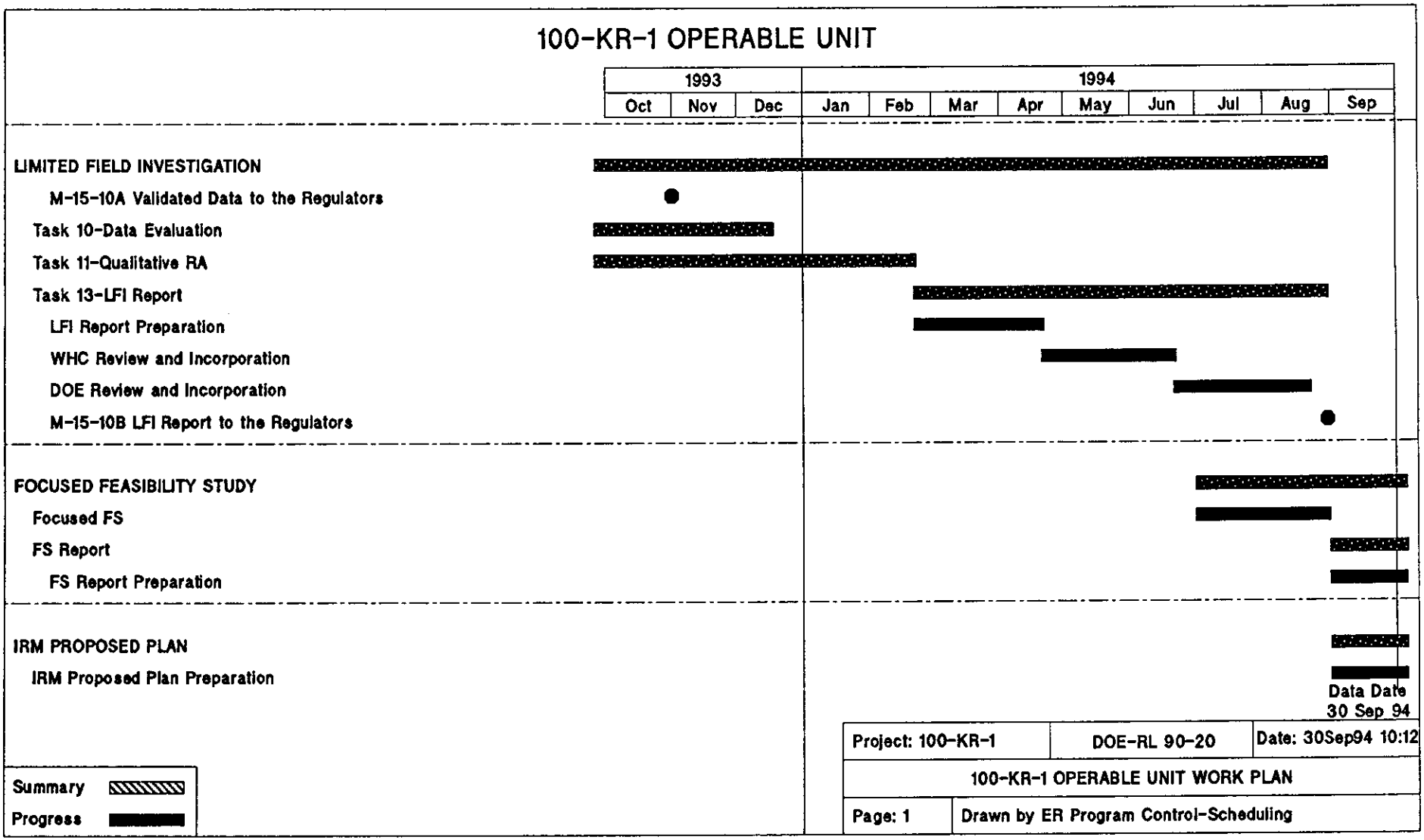


K AREA

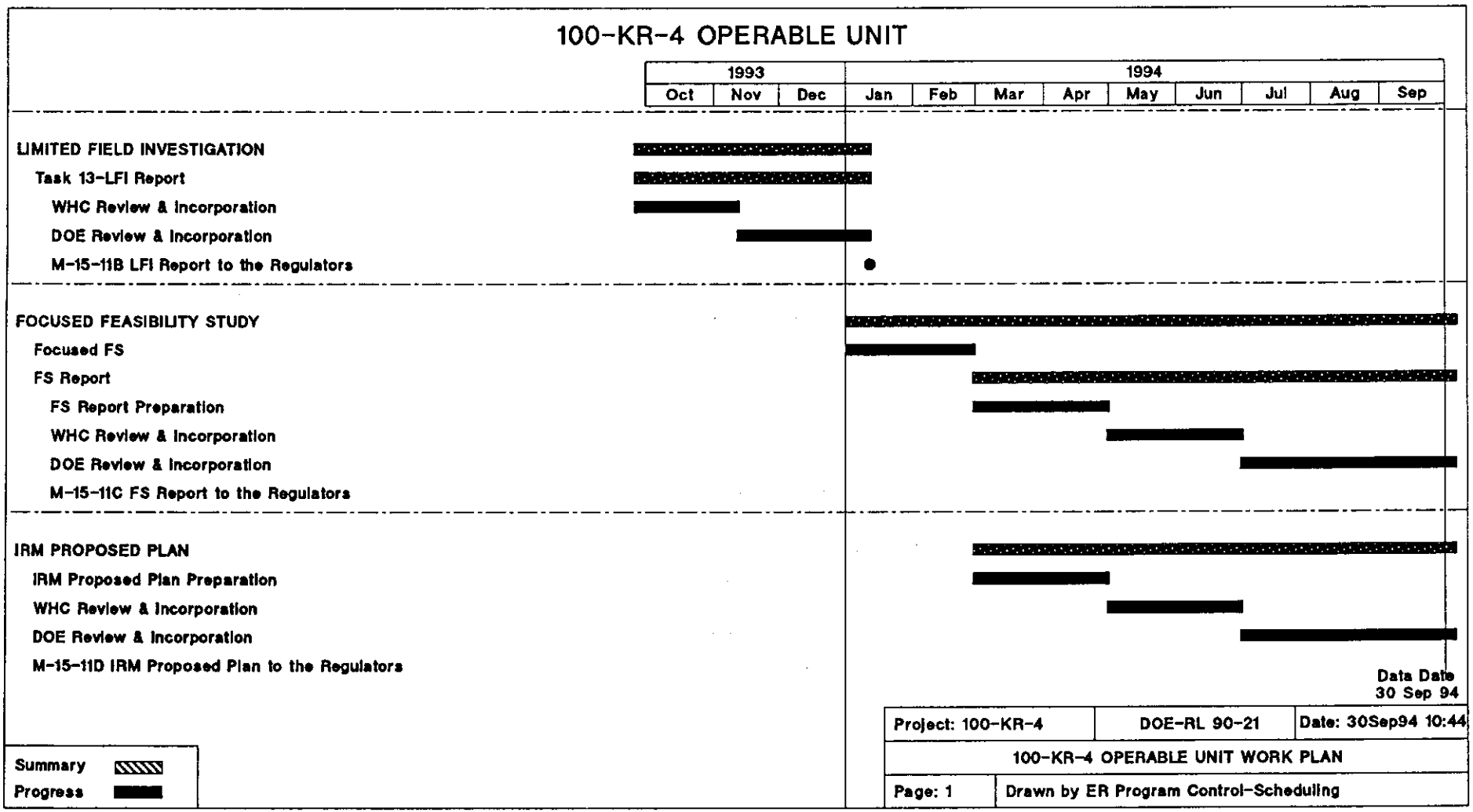
Focused Feasibility Study

Work continued on the 100-KR-1 and 100-KR-4 Focused Feasibility Studies. The 100-KR-1 and 100-KR-4 FFSs were submitted for DOE/RL review on August 11, 1994. Comment resolution has been completed and incorporation is underway.

100-KR-1 OPERABLE UNIT



100-KR-4 OPERABLE UNIT



D AREA

100-DR-1

100-DR-1 Focused Feasibility Study

- 100-DR-1 Focused Feasibility Study report was transmitted to DOE-RL for submittal to the Regulators to meet September 30, 1994 date for the TPA milestone M-15-07C.

100-DR-1 Interim Remedial Measures Proposed Plan

- 100-DR-1 IRM Proposed Plan was transmitted to DOE-RL for submittal to the Regulators to meet September 30, 1994 TPA milestone M-15-07D.

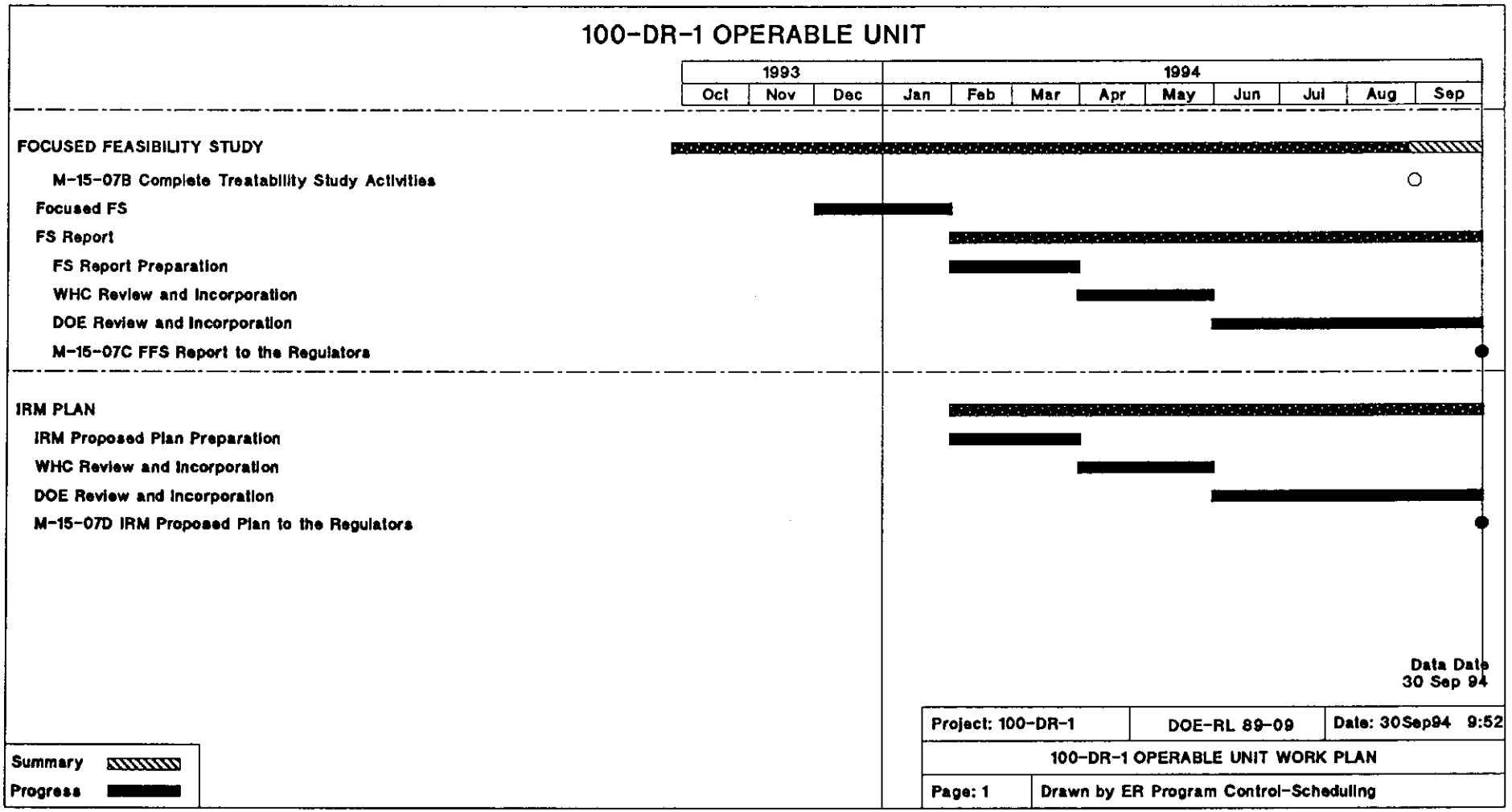
100-DR-2

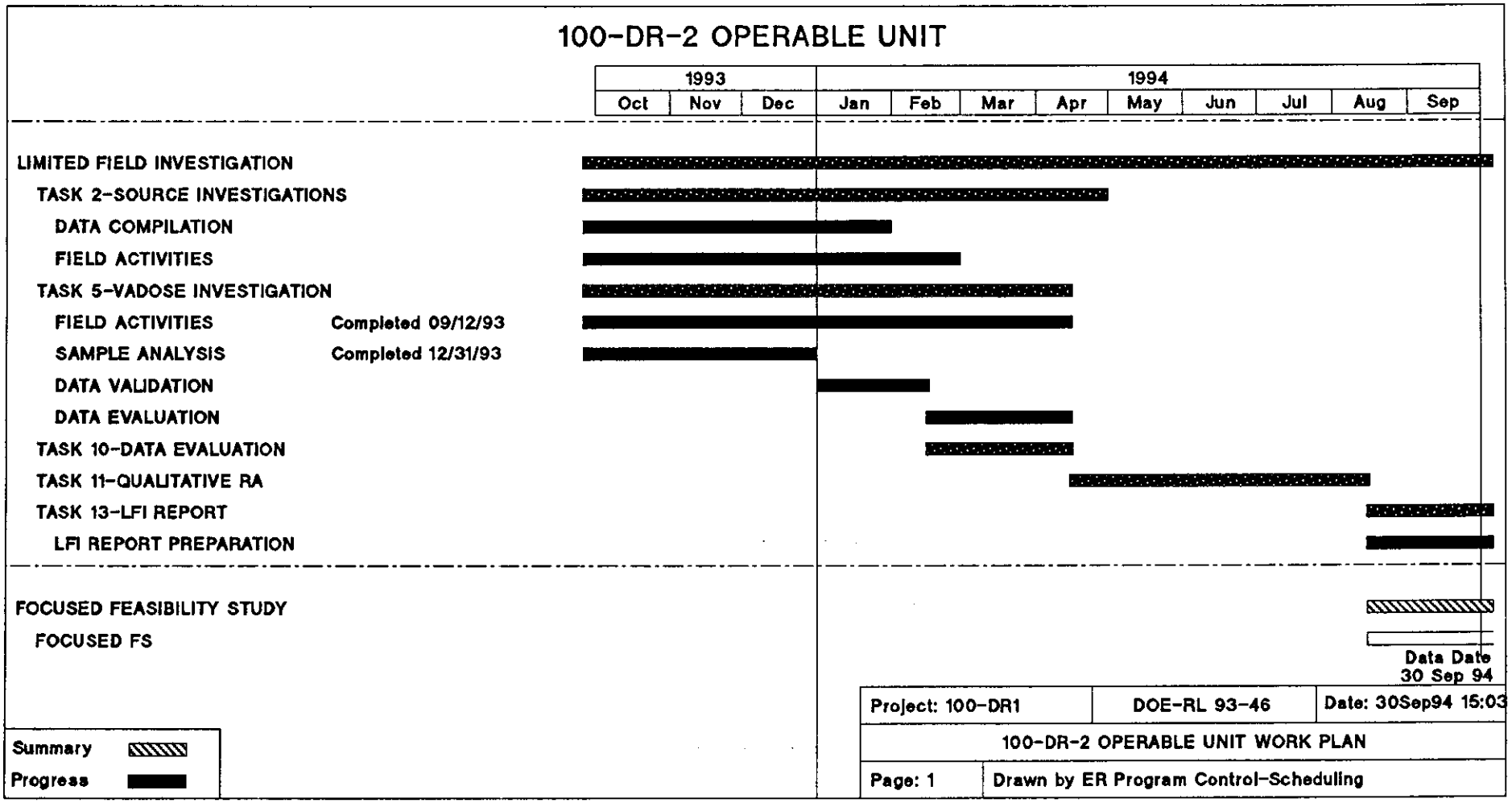
100-DR-2 Work Plan

- A meeting was held to discuss resolutions for the Ecology and EPA comments.

100-DR-2 LFI (LFI/QRA) Report

- The internal review has been completed and the comments have been addressed.





H AREA

100 HR-1

- FFS REPORT and the IRM Proposed Plan: The 100 HR-1 Operable Unit Focused Feasibility Study Report, DOE/RL-94-63, Draft A, and the Proposed Plan for Interim Remedial Measures at the 100-HR-1 Operable Unit, DOE/RL-94-101, Draft A, were submitted to DOE September 23. DOE transmitted the documents to the regulators September 30, 1994 in compliance with TPA Milestones M-15-05C and M-15-05D, respectively.

100 HR-2

- LFI/QRA REPORTS: The 100-HR-2 LFI/QRA Report (single document), DOE/RL-94-53, Draft A, was submitted to DOE on September 8th, eight days ahead of schedule. DOE transmitted the document to the regulators on September 30, 1994 in compliance with TPA Milestone M-15-18A.

- FOCUSED FEASIBILITY REPORT: The 100-HR-2 FFS Report, DOE/RL-94-65, Decisional Draft, is currently being revised to incorporate the comments developed during the 100-BC-1, DR-1, and HR-1 FFS DOE reviews.

- IRM PROPOSED PLAN: Work has been initiated on the 100-HR-2 Proposed Plan. Comments developed during the 100-BC-1, DR-1, and HR-1 PP DOE reviews are being incorporated in the document.

- RADIOLOGICAL SURVEY: The survey report for the overflow trench extension is currently undergoing BHI internal review.

100 HR-3

- The groundwater treatability pilot test in D Reactor area was initiated five days ahead of the August 31, 1994 TPA Milestone M-15-06E date.

- LFI AND QRA REPORTS: The 100 HR-3 LFI Report, DOE/RL-93-43, Rev 0, and the QRA Report, WHC.SD.EN.RA-007, Rev 0, were transmitted to DOE on September 23rd for submittal to the regulators September 30, 1994. The documents will be submitted for public review.

- GROUNDWATER SAMPLING: Validation of 100 HR-3 Round 7 groundwater sampling event is in progress.

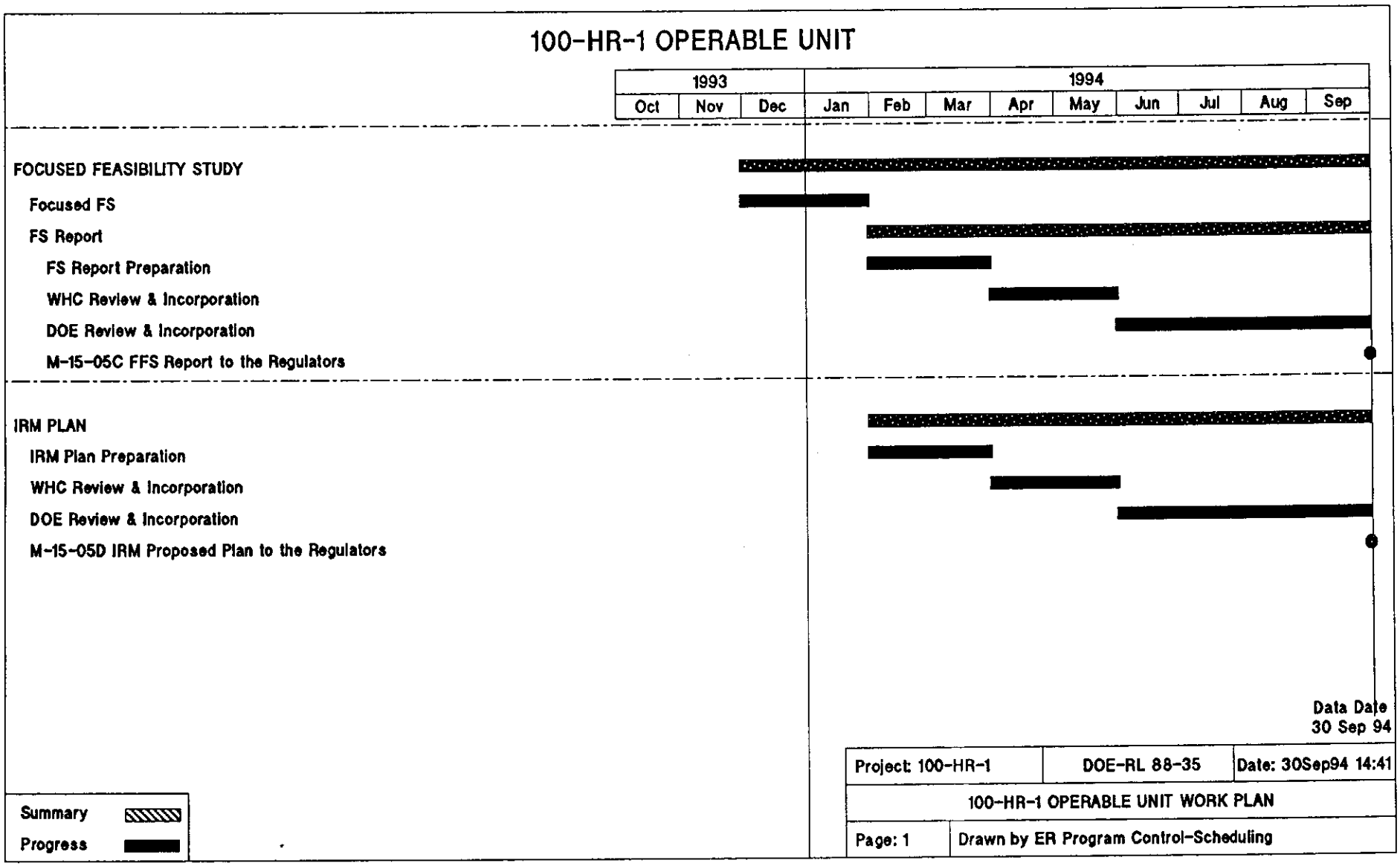
- FFS REPORT and IRM Proposed Plans: The 100 HR-3 Focused Feasibility Study Report, DOE/RL-94-67, Draft A, and the Proposed Plan for Interim Remedial Measures at the 100-HR-3 Operable Unit, DOE/RL-94-102 were submitted to DOE on September 23rd. DOE transmitted the documents to the regulators September 30, 1994 in compliance with TPA Milestones M-15-06C and M-15-06D, respectively.

- INSITU FLOW SENSORS: Insitu flow sensors continue to operate normally and data is being reduced and evaluated.

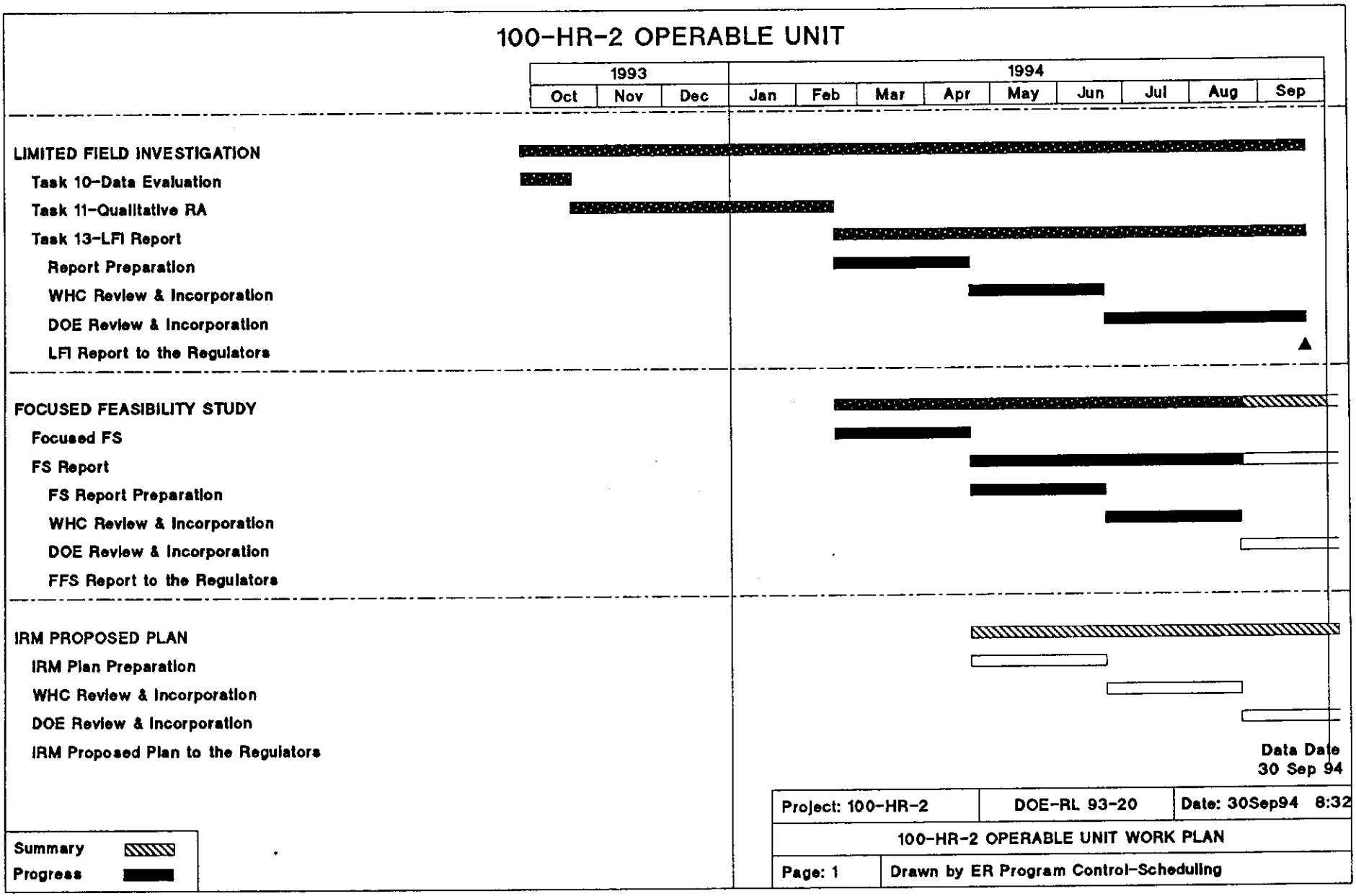
- AQUIFER TEST PLAN WELLS: 24 hour constant rate-discharge tests were conducted on each of the three test wells (lower screen only, in the Dipole well completion). Conventional slug tests were also conducted on the two non-dipole wells. Further work suspended pending identification of FY 95 funding.

- 100-IU-4 -- SODIUM DICHROMATE BARREL DISPOSAL SITE ERA: The AR Report and the Proposed Plan Report for this ERA are currently in regulatory review.

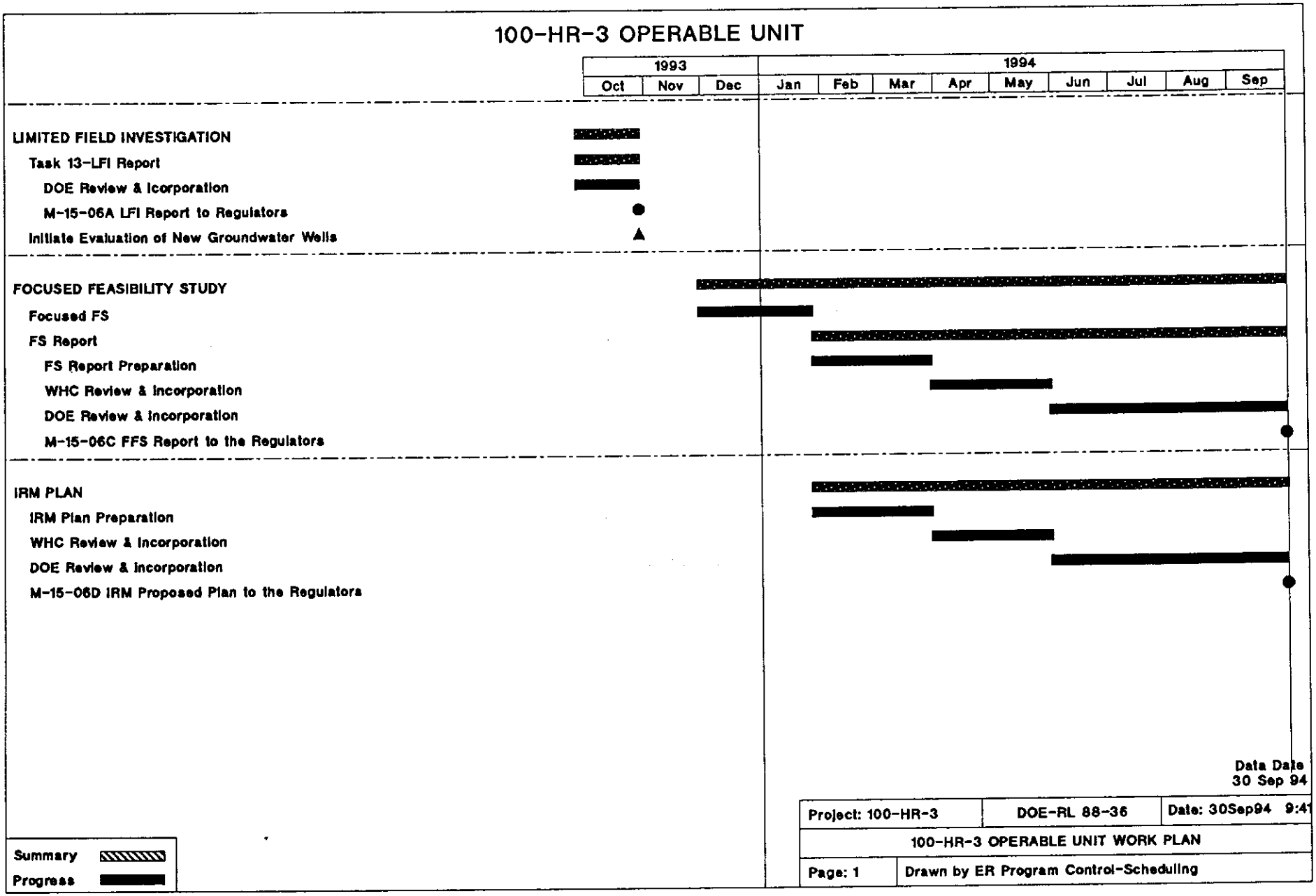
100-HR-1 OPERABLE UNIT



100-HR-2 OPERABLE UNIT



100-HR-3 OPERABLE UNIT



F Area

100-FR-1

TASK 11: 100-FR-1 QRA (WHC-SD-EN-RA-013, Rev. 0) was submitted to DOE/RL on September 2, 1994 for transmittal to EPA/Ecology.

TASK 13: 100-FR-1 LFI (DOE/RL-93-82, Draft A) was submitted to DOE/RL on September 2, 1994 for transmittal to EPA/Ecology.

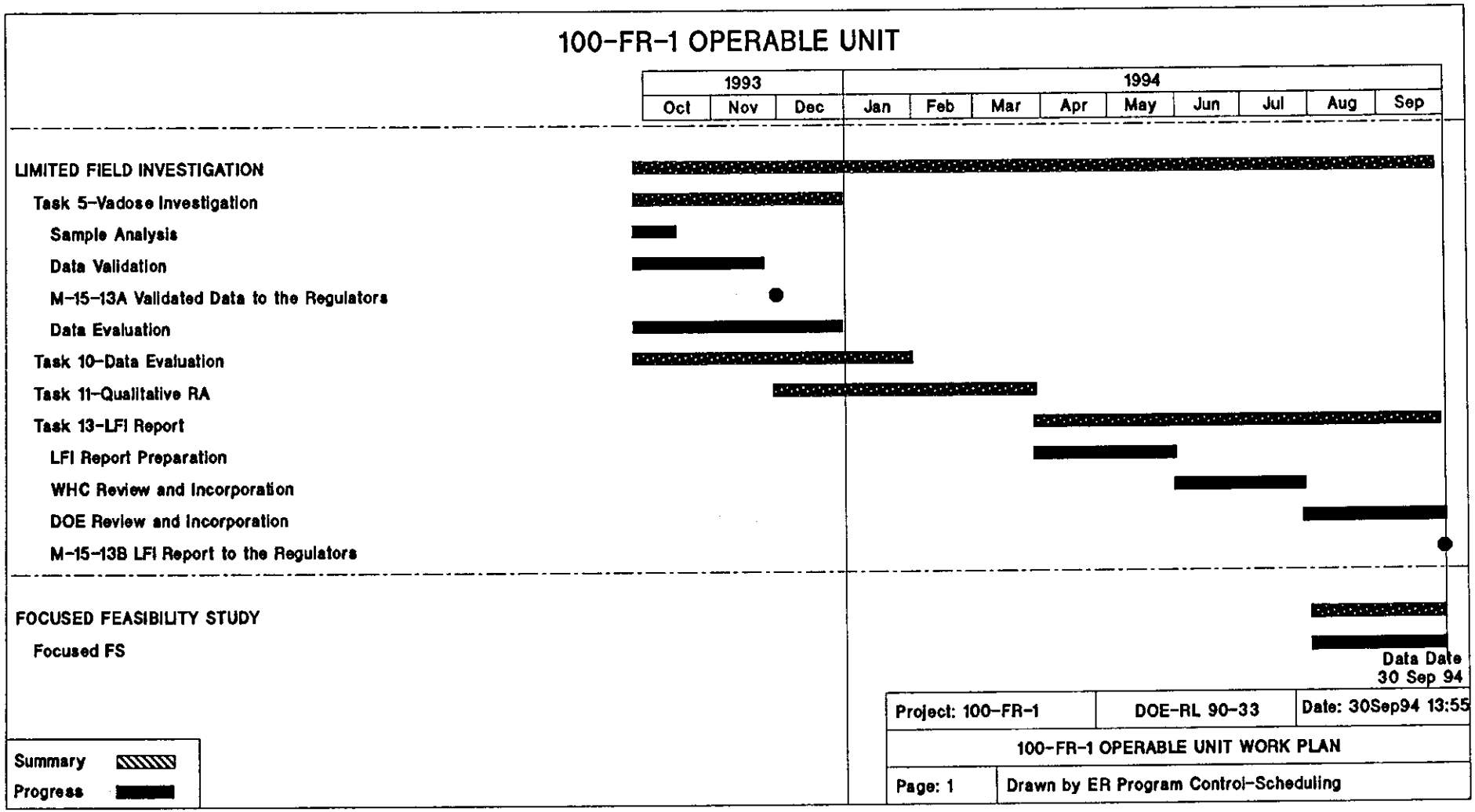
100-FR-3

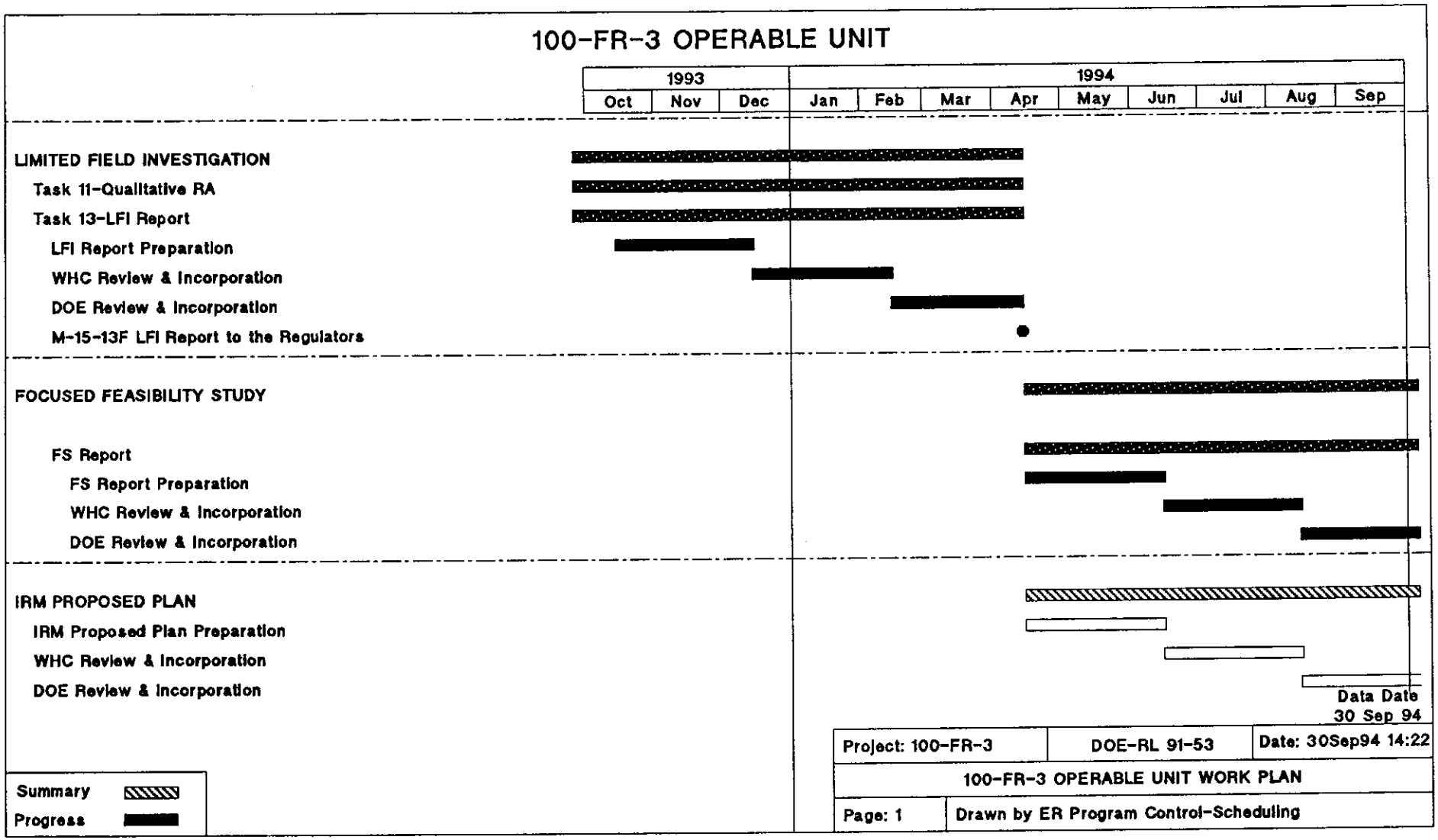
Task 11: Regulator review comments on the 100-FR-3 QRA have been received and comment resolutions submitted to DOE.

Task 13: Regulator review comments on the 100-FR-3 LFI have been received and comment resolutions submitted to DOE.

Focused Feasibility Study

- The Focused Feasibility Study has been initiated and the ERC review completed. The FFS was submitted to DOE for Review.





Dust Suppressant and Wash Water Recycling Tests on 116-D-1B Trench Soil

S. V. Mattigod and R. J. Serne
Pacific Northwest Laboratory

Unit Managers' Meeting , October 20, 1994

Dust Suppressant and Wash Water Recycling Tests on 116-D-1B-Soil

- Effects of dust suppressants on wet-sieving and radionuclide distribution.
- Test contaminant distribution during wet sieving wash water recycling (10 cycles).
- Test contaminant distribution during attrition scrubbing (with water and with electrolyte) wash water recycling (5 cycles each).

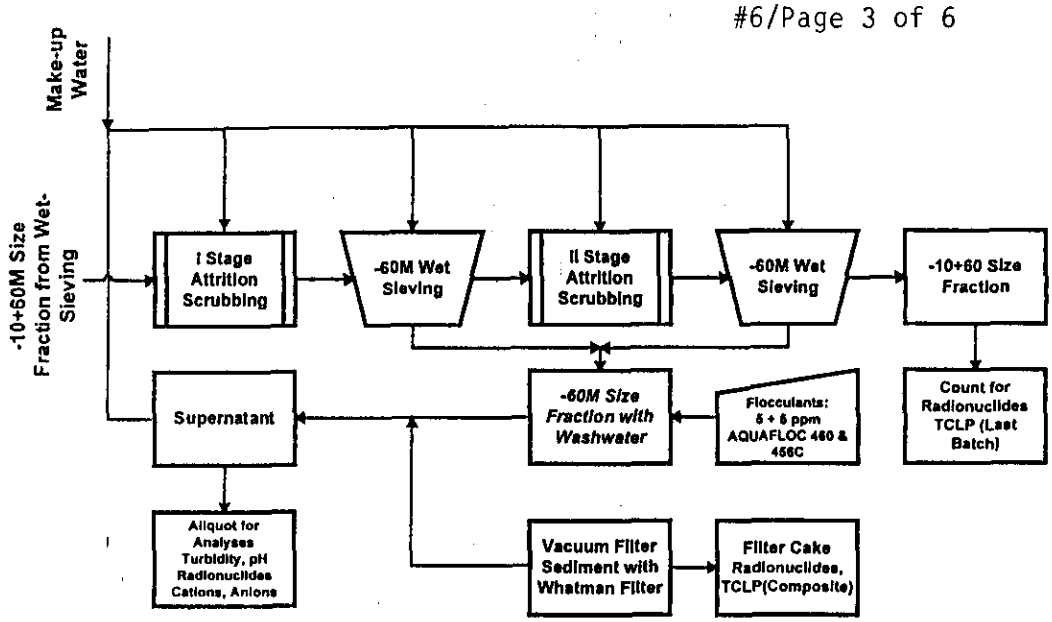
Dust Suppressant Tests: Summary

- Wash waters from DUSTAC treated samples could not be flocculated effectively.
- Wash waters from treated soil samples had about 5 to 10 times more TDS than the untreated sample.
- Dust suppressants caused acidification of wash waters.
- Flocculated wash waters from treated soil samples contained significantly enhanced activities of ^{60}Co, ^{137}Cs, and ^{152}Eu.
- Effects of dust suppressant treated soil on wash water recyclability are unknown.

Wet Sieving Wash Water Recycling Tests: Summary

- Radionuclide (^{60}Co, ^{137}Cs, and ^{152}Eu) distribution between soil and wash water remained relatively constant during wash water recycling.
- Wash water from each recycling step was readily flocculated by using 10 ppm of CAT-FLOC L (a polymeric flocculent).
- Radionuclide (^{60}Co, ^{137}Cs, and ^{152}Eu) activities in recycled wash water were very low.
- Concentrations of all trace elements in flocculated recycled wash water remained low.

Test Scheme for Recycling Washwater
from Attrition Scrubbing with Water
Trench 116-D-1B Soil



Attrition Scrubbing (Water Medium) Wash Water Recycling Tests: 116-D-1B Soil.
Wash Water Characteristics: Major Elements (mg/L)

Element	Tap Water	Recycling Step					PWCC*
		I	II	III	IV	V	
Ca	21.6	23.2	29.9	41.8	51.0	54.8	--
Mg	4.8	4.6	6.0	7.7	10.6	11.9	--
K	1.3	3.4	7.5	7.0	8.4	10.3	--
Na	5.5	15.6	35.2	34.0	41.5	46.4	--
Cl	8.7	5.0	6.2	55.5	77.1	92.5	2500
NO_3	7.2	5.1	5.3	5.1	5.8	5.6	450
SO_4	16.0	20.8	20.6	20.0	18.2	20.2	2500
HCO_3	55.1	92.5	105.5	134.0	135.5	131.6	--

*Purge Water Collection Criteria (WHC-CM-7-5, 1993)

Attrition Scrubbing (Water Medium) Wash Water: 116-D-1B Soil: Trace Elemental Composition (µg/L).

Element	Tap Water	Recycling Step					PWCC*
		I	II	III	IV	V	
Ag	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	10
As	1.2	3.1	4.4	5.0	2.8	3.6	480
Ba	18.1	9.6	9.9	23.4	31.0	38.9	10000
Cd	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	11
Cr	<1.0	7.2	6.8	7.5	9.0	8.0	110
Cu	4.3	20.9	28.1	22.1	29.4	14.5	120
Hg	<2.0	<1.0	<1.0	1.0	<1.0	<1.0	0.1
Pb	<1.0	1.1	<1.0	<1.0	<1.0	<1.0	32

*PWCC: Purge Water Collection Criteria. WHC-CM-7-5, 1993.

Attrition Scrubbing (Water Medium) Wash Water: 116-D-1B Soil: Trace Elemental Composition (µg/L).

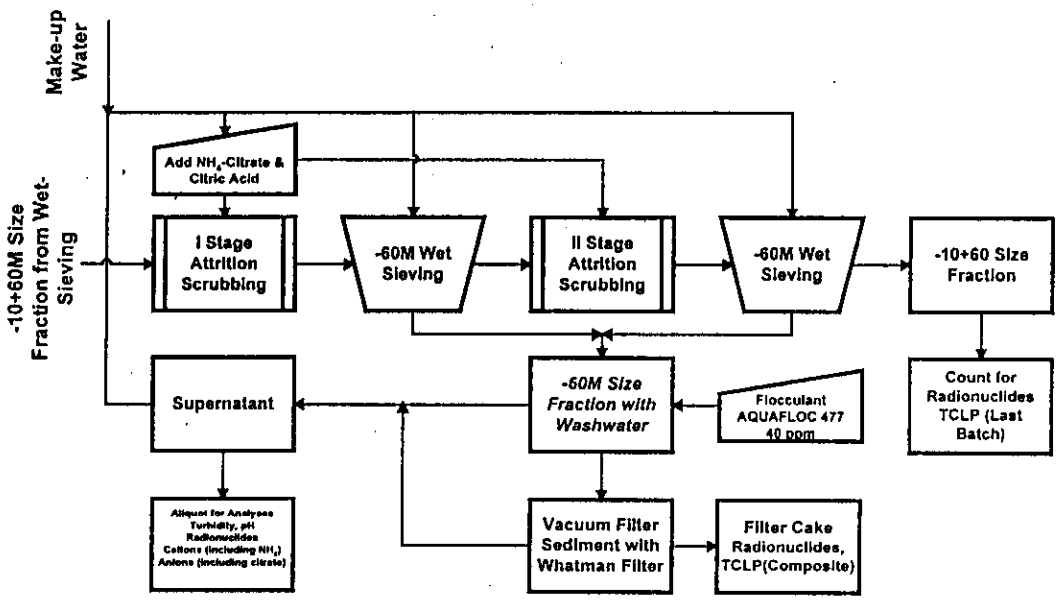
Element	Tap Water	Recycling Step					PWCC*
		I	II	III	IV	V	
Be	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	53
Fe	<50	<10	<10	110	170	180	3000
Mn	4.1	<1.0	<1.0	13.0	7.6	18.8	500
Ni	<1.0	<1.0	4.1	7.3	10.0	10.6	1600
Sb	<1.0	<1.0	<1.0	<1.0	1.2	1.0	16000
Tl	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	400
U	1.2	2.2	2.5	3.6	3.9	4.1	590
V	2.4	26.8	41.3	30.7	23.1	21.3	400
Zn	9.4	16.0	11.8	19.0	21.3	25.0	1100

*PWCC: Purge Water Collection Criteria. WHC-CM-7-5, 1993.

Two-Stage Attrition Scrubbing (water medium) Wash Water Recycling Tests: Summary

- Radionuclide (^{60}Co, ^{137}Cs, and ^{152}Eu) distribution between soil and wash water remained relatively constant during wash water recycling.
- Wash water from each recycling step was readily flocculated by using 5 ppm each of AQUAFLOC 460 and 456C (polymeric flocculents).
- Radionuclide (^{60}Co, ^{137}Cs, and ^{152}Eu) activities in flocculated recycled wash water were very low.
- Concentrations of all trace elements in flocculated recycled wash water remained low.

Test Scheme for Recycling Washwater from Attrition Scrubbing with Electrolyte Trench 116-D-1B Soil



Attrition Scrubbing (Electrolyte Medium) Wash Water Recycling Tests: 116-D-1B Soil. Preliminary Data: Radionuclide Activity in 2 - 0.25-mm Size Fraction (pCi/g)

Radionuclide	Recycling Step/Scrubbing Stage									
	I		II		III		IV		V	
	1	2	1	2	1	2	1	2	1	2
^{60}Co	0.4	0.1	0.3	0.2	0.4					
^{137}Cs	53.8	46.3	56.0	40.3	62.3					
^{152}Eu	8.3	4.7	9.1	5.0	12.0					

Attrition Scrubbing (Electrolyte Medium) Wash Water Recycling Tests: 116-D-1B Soil. Preliminary Data: Wash Water Characteristics

Parameter	Tap Water	Recycling Step				
		I	II	III	IV	V
pH (SU)	7.3	3.6	3.7	3.7		
Conductivity (µS/cm)	142	4820	8340	10930		
Turbidity (NTU)	2.79	249	124	152		
^{60}Co (pCi/L)	--	327	950	1367		
^{137}Cs (pCi/L)	--	1515	4130	5907		
^{152}Eu (pCi/L)	--	3997	11290	15840		

Purge Water Collection Criteria (WHC-CM-7-5, 1993) ^{60}Co, and ^{137}Cs are 1000, and 2000 pCi/L respectively.

OCTOBER 1994 UNIT MANAGERS MEETING

Open Items Remaining for Start of Soil Washing

- Need to resolve EPA comments on test procedures. Haven't received comments from Ecology. Comment resolution meeting should be scheduled

- Several meetings were held during the Spring to reach agreement concerning analytical methods/numbers of samples etc. Agreement has not yet been reached.

  BHI is preparing a SAP and QAPP to address these issues. These document should be ready for transmittal to RL and Regulatory Agencies next week (Week of October 24, 1994).

- Waste Control Plan submitted to Regulatory Agencies last week. Requires RL and Ecology approval.

- Preliminary bench scale water recycle tests should significant build up of radionuclides in the electrolyte.

- Milestone negotiations.

100-HR-3 PUMP AND TREAT STATUS
OCTOBER UNIT MANAGERS MEETING

- Phase II Construction Activities Continue on Schedule. Remaining activities include:
  - electrical wiring
  - heat trace
  - level indicators
  - minor pipefitting work

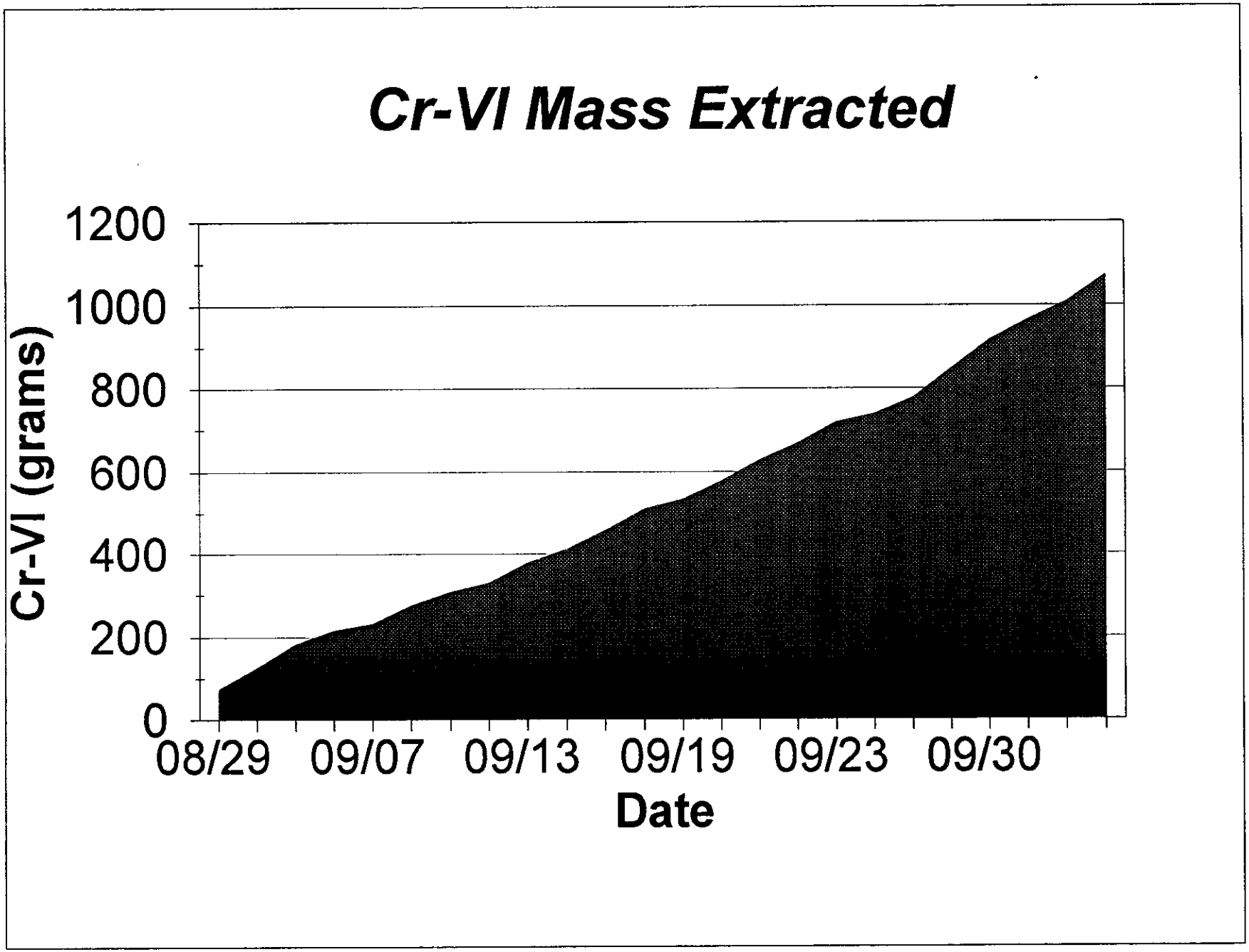
- The system will be shut down on October 31 and November 1 to complete final electrical wiring (electrician will also be working on Saturady October 29, 1994).

- Operations were temporarily suspended from September 30 to October 13 due to concern over the possibility of volatile organics in the system (detected during field screening). Laboratroy confirmation samples indicated no volatile organics of concern.

- Currently extracting out of wells D5-14, D5-15, and D5-16 (Well D5-16 was placed on line September 29, 1993). Injecting into D5-18 and D5-19.

100-HR-3 Pump and Treat Chromium-VI Mass Removed

Date	Well 14				Well 15				Well 16				Effl.	Total	Cum.	Cum.
	Time hrs	Flow gpm	Cr-6 conc. ppb	Mass grams	Time hrs	Flow gpm	Cr-6 conc. ppb	Mass grams	Time hrs	Flow gpm	Cr-6 conc. ppb	Mass grams	Cr-6 conc. ppb	Mass grams	Mass grams	Flow gal
08/26					3.50	20	1674	26.6					0	26.6	27	4.20E+03
08/29					6.25	20	1674	47.5					0	47.5	74	1.17E+04
08/31					6.50	21	1674	51.8					0	51.8	126	1.99E+04
09/01					7.18	21	1674	57.2					0	57.2	183	2.89E+04
09/02					3.83	21	1780	32.5					0	32.5	216	3.38E+04
09/07					2.25	20	1681	17.2					0	17.2	233	3.65E+04
09/08					5.25	20	1839	43.8					0	43.8	277	4.28E+04
09/09					3.85	20	1819	31.8					0	31.8	308	4.74E+04
09/12					2.92	20	1740	23.1					0	23.1	331	5.09E+04
09/13					6.42	19	1760	48.7					0	48.7	380	5.82E+04
09/14					4.67	19	1582	31.8					0	31.8	412	6.35E+04
09/15					6.83	19	1582	46.6					0	46.6	458	7.13E+04
09/16					6.83	19	1780	52.4					0	52.4	511	7.91E+04
09/19					3.00	19	1760	22.8					0	22.8	534	8.25E+04
09/20					5.67	19	1786	43.6					0	43.6	577	8.90E+04
09/21					6.70	18.75	1786	50.9					0	50.9	628	9.65E+04
09/22					4.90	19	1850	39.1					0	39.1	667	1.02E+05
09/23	4.75	4	1600	6.9	5.96	19	1716	44.1					0	51.0	718	1.10E+05
09/26	4.72	4.5	1625	7.8	1.67	19	1840	13.2					0	21.1	739	1.13E+05
09/28	3.82	5	1650	7.1	3.93	19	1800	30.5					0	37.6	777	1.19E+05
09/29	6.73	6.2	1650	15.6	6.93	19	1700	50.8	3.33	3	1225	2.8	0	69.2	846	1.30E+05
09/30	6.15	6.4	1800	16.07	6.15	18.5	1800	46.4	6.15	3.8	1250	6.6	0	69.1	915	1.40E+05
10/03	4.22	6	1800	10.34	4.30	18	1900	33.35	4.18	4	1350	5.12	0	48.8	964	1.48E+05
10/17	4.70	5	1770	9.43	5.07	17	1450	28.34	4.6	3.25	1200	4.07	0	41.8	1006	1.55E+05
10/18	7.33	5	1675	13.92	7.33	17.2	1525	43.61	7.38	3	1300	6.53	0	64.1	1070	1.66E+05


Cr-VI Mass Extracted
Cr-VI (grams)
1200
1000
800
600
400
200
0
08/29
09/07
09/13
09/19
09/23
09/30
Date

100-HR-3 Ion Exchange Loading Time Log

Date	Time on	Time off	Lead	1st Lag	2nd Lag	S/B	Run Time	Flow rate (gpm)	Total Flow (gal.)	Cum. Flow (gal.)	Total C/V (col. vol.)	Cum. C/V (col. vol.)	Conc. Cr (ppb)
08/29	14:20	15:35	T-100	T-200	T-300	T-400	01:15	35	2625	2.63E+03	16.9	17	0
08/31	09:55	12:38	T-100	T-200	T-300	T-400	02:43	36	5868	8.49E+03	37.8	55	0
09/07	11:50	15:15	T-100	T-200	T-300	T-400	03:25	36	7380	1.59E+04	47.5	102	0
09/08	09:50	11:43	T-100	T-200	T-300	T-400	01:53	50	5650	2.15E+04	36.4	139	0
09/12	12:00	14:50	T-100	T-200	T-300	T-400	02:50	50	8500	3.00E+04	54.7	193	0
09/12	14:58	15:25	T-100	T-200	T-300	T-400	00:27	50	1350	3.14E+04	8.7	202	0
09/13	08:29	10:34	T-100	T-200	T-300	T-400	02:05	53	6625	3.80E+04	42.6	245	0
09/14	11:25	11:52	T-100	T-200	T-300	T-400	00:27	53	1431	3.94E+04	9.2	254	0
09/14	11:55	14:55	T-100	T-200	T-300	T-400	03:00	53	9540	4.90E+04	61.4	315	0
09/14	14:58	15:22	T-100	T-200	T-300	T-400	00:24	53	1272	5.02E+04	8.2	323	0
09/15	08:20	09:53	T-100	T-200	T-300	T-400	01:33	53	4929	5.52E+04	31.7	355	0
09/16	11:30	12:55	T-100	T-200	T-300	T-400	01:25	53	4505	5.97E+04	29.0	384	0
09/19	10:32	12:02	T-100	T-200	T-300	T-400	01:30	53	4770	6.44E+04	30.7	415	0
09/19	12:02	12:56	T-100	T-200	T-300	T-400	00:54	56	3024	6.75E+04	19.5	434	0
09/19	12:59	14:50	T-100	T-200	T-300	T-400	01:51	56	6216	7.37E+04	40.0	474	0
09/20	11:25	11:35	T-100	T-200	T-300	T-400	00:10	50	500	7.42E+04	3.2	477	0
09/20	11:35	12:30	T-100	T-200	T-300	T-400	00:55	56	3080	7.73E+04	19.8	497	0
09/20	12:35	15:30	T-100	T-200	T-300	T-400	02:55	56	9800	8.71E+04	63.1	560	0
09/21	08:37	09:12	T-100	T-200	T-300	T-400	00:35	56	1960	8.90E+04	12.6	573	0
09/22	11:04	14:36	T-100	T-200	T-300	T-400	03:32	56	11872	1.01E+05	76.4	649	0
09/22	14:42	15:30	T-100	T-200	T-300	T-400	00:48	56	2688	1.04E+05	17.3	667	0
09/23	09:20	09:38	T-100	T-200	T-300	T-400	00:18	56	1008	1.05E+05	6.5	673	0
09/27	09:02	10:30	T-100	T-200	T-300	T-400	01:28	56	4928	1.10E+05	31.7	705	0
09/27	11:00	12:10	T-100	T-200	T-300	T-400	01:10	56	3920	1.13E+05	25.2	730	0
09/27	12:36	13:12	T-100	T-200	T-300	T-400	00:36	56	2016	1.15E+05	13.0	743	0
09/27	13:55	15:32	T-100	T-200	T-300	T-400	01:37	56	5432	1.21E+05	35.0	778	0
09/28	09:25	10:11	T-100	T-200	T-300	T-400	00:46	56	2576	1.23E+05	16.6	794	0
09/29	12:05	15:25	T-100	T-200	T-300	T-400	03:20	56	11200	1.35E+05	72.1	867	0
09/30	09:59	12:09	T-100	T-200	T-300	T-400	02:10	56	7280	1.42E+05	46.8	913	0
10/03	09:10	09:25	T-100	T-200	T-300	T-400	00:15	56	840	1.43E+05	5.4	919	0
10/14	13:26	14:13	T-100	T-200	T-300	T-400	00:47	56	2632	1.45E+05	16.9	936	0
10/17	08:40	12:55	T-100	T-200	T-300	T-400	04:15	56	14280	1.60E+05	91.9	1028	0
10/18	10:11	15:15	T-100	T-200	T-300	T-400	05:04	56	17024	1.77E+05	109.5	1137	0

Control Number: 73	100 NPL Agreement/Change Control Form __ Change X Agreement __ Information Operable Unit(s): 100-HR-3	Date Submitted: 10/20/94 Date Approved:

Project: 100-HR-3 Groundwater Treatability Pilot Test Summary of Items of Agreement Among BHI, DOE, WSDOE, EPA	Date Document Last Issued:
Originator: J. G. Woolard	Phone: 376-2539

Summary Description:

A meeting was held on October 12, 1994, to discuss revising some of the 100-HR-3 Pump and Treat operating and design agreements documented in NPL agreement form #66 and DOE/RL-94-54. The following represents agreements reached by the Tri-Parties on October 12, 1994.

- Phase II treatability test operations will be conducted 24 hours per day, 5 days per week, excluding holidays. The extraction network will be operated 24 hours/day and the ion exchange unit will be operated during an 8-hour day shift.
- The ion exchanger may be operated in a 2+2 configuration (2 columns in series [lead/lag] in parallel with the other 2 columns in series [lead/lag]) at a flowrate up to 80 gpm (or higher if feed pump is capable).
- Drip pans will not be installed under couplings in the extraction and injection pipelines.

Justification and Impact of Change:

Reducing operations from 7 days to 5 days per week will save operating costs while still achieving overall test goals. The test plan will require modification to reflect changes in system operation.

Operating the ion exchange unit in a 2+2 configuration will allow the unit to process greater volumes in an 8 hour shift. Operating in this configuration will not adversely impact the quality of the discharged effluent. Adequate backup will be provided by the two lag ion exchange columns.

Drips pans are not needed to provide environmental protection. Bermed liners have been placed underneath the influent and effluent tanks and ion exchange unit. The bermed liners will provide adequate protection of the environment from spills.

J. G. Woolard BHI Operable Unit Manager	Date 10/20/94
K. M. Thompson DOE Unit Manager	Date Oct 20, 1994
W. W. Soper Ecology Unit Manager	Date 10-20-94
K. J. Oates for Env. Protection Agency Unit Manager	Date 10-20-94

Per Action Plan for Implementation of the Hanford Consent Order and Compliance Agreement Section 9.3.

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October 20, 1994

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